

Qty. Description

1 CRE 64-2-1 N-F-A-E-HQQE



Note! Product picture may differ from actual product

Product No.: [96124000](#)

Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via DIN flanges.

The pump is fitted with a 3-phase, fan-cooled asynchronous motor.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

The terminal box holds terminals for these connections:

- pump start/stop input (potential-free contact)
- remote setpoint setting via analog signal, 0-10 V, 0(4)-20 mA
- 10 V voltage supply for setpoint potentiometer, I_{max} = 5 mA
- three analog sensor inputs, 0-10 V, 0(4)-20 mA; the factory-fitted pressure sensor is connected to one of these inputs
- 24 V voltage supply for sensor, I_{max} = 40 mA
- one analog output
- three digital inputs
- two Pt100 inputs
- two potential-free fault signal relays with changeover contact, reporting "Fault", "Operation" or "Ready"
- RS-485 GENIbus connection
- interface for Grundfos CIM fieldbus module.

Further product details

The pump is equipped with a pressure sensor registering pump outlet pressure and enabling controlled pump operation based on constant pressure.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The operating panel has indicator lights for "Operation" and "Fault".

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

Steel, cast iron and aluminium components have an epoxy-based coating made in a cathodic electro-deposition (CED) process.

CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface.

An integral part of the process is a pretreatment.

The entire process consists of these elements:

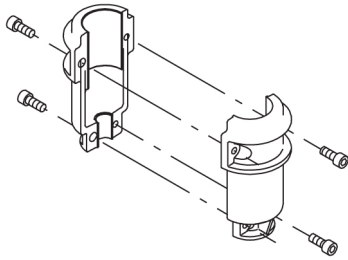
- 1) Alkaline-based cleaning.
- 2) Zinc phosphating.
- 3) Cathodic electro-deposition.
- 4) Curing to a dry film thickness 18-22 my m.

Qty. Description

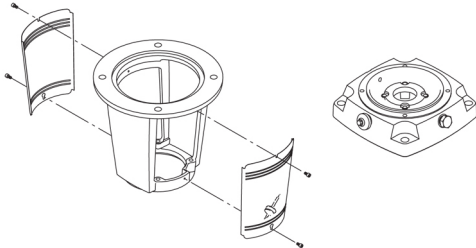
1 The colour code for the finished product is NCS 9000/RAL 9005.

Pump

A long split coupling connects the pump and motor shaft. It is enclosed in the motor stool by means of two coupling guards. The long coupling makes it possible to replace the shaft seal without removing the motor from the pump.



The motor stool connects the pump head and motor. The pump head has a combined 1/2" priming plug and vent screw.



The pump is fitted with a balanced O-ring seal unit with a rigid torque-transmission system.

This seal type is assembled in a cartridge unit which makes replacement safe and easy.

Due to the balancing, this seal type is suitable for high-pressure applications.

The cartridge construction also protects the pump shaft from possible wear from a dynamic O-ring between pump shaft and shaft seal.

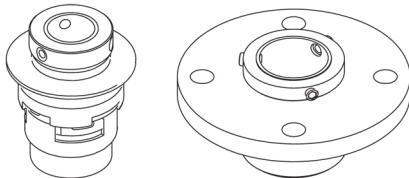
Seal faces:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: EPDM (ethylene-propylene rubber)

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.



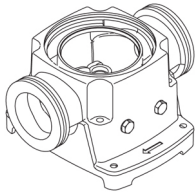
The shaft seal is retained in the pump head by a cover and screws. It can be replaced without removing the motor.

The chambers and impellers are made of stainless-steel sheet. The chambers are provided with a PTFE neck ring offering improved sealing and high efficiency. The impellers have smooth surfaces, and the shape of the blades ensure a high efficiency.

The base is made of cast iron. Both the inlet and the outlet side of the base have two pressure gauge tappings. The pump is secured to the foundation by four bolts through the base plate. The flanges are fastened to the base by means of locking rings.

Qty. Description

1



Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5 (Code I) / IM 3001 (Code II).

Electrical tolerances comply with IEC 60034.

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

Technical data

Liquid:

Pumped liquid: Water
 Liquid temperature range: -30 .. 120 °C
 Selected liquid temperature: 20 °C
 Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 3540 rpm
 Rated flow: 77 m³/h
 Rated head: 53.8 m
 Pump orientation: Vertical
 Shaft seal arrangement: Single
 Code for shaft seal: HQQE
 Approvals: CE,EAC,UKCA,SEPRO
 Approvals for drinking water: WRAS,ACS
 Curve tolerance: ISO9906:2012 3B

Materials:

Base: Cast iron
 EN 1563 EN-GJS-500-7
 ASTM A536 80-55-06
 Impeller: Stainless steel
 EN 1.4301
 AISI 304
 Bearing: SIC
 Support bearing: Graflon

Installation:

t max amb: 40 °C
 Maximum operating pressure: 16 bar
 Max pressure at stated temp: 16 bar / 120 °C
 16 bar / -30 °C

Type of connection: DIN
 Size of inlet connection: DN 100
 Size of outlet connection: DN 100
 Pressure rating for connection: PN 16
 Flange size for motor: FF300

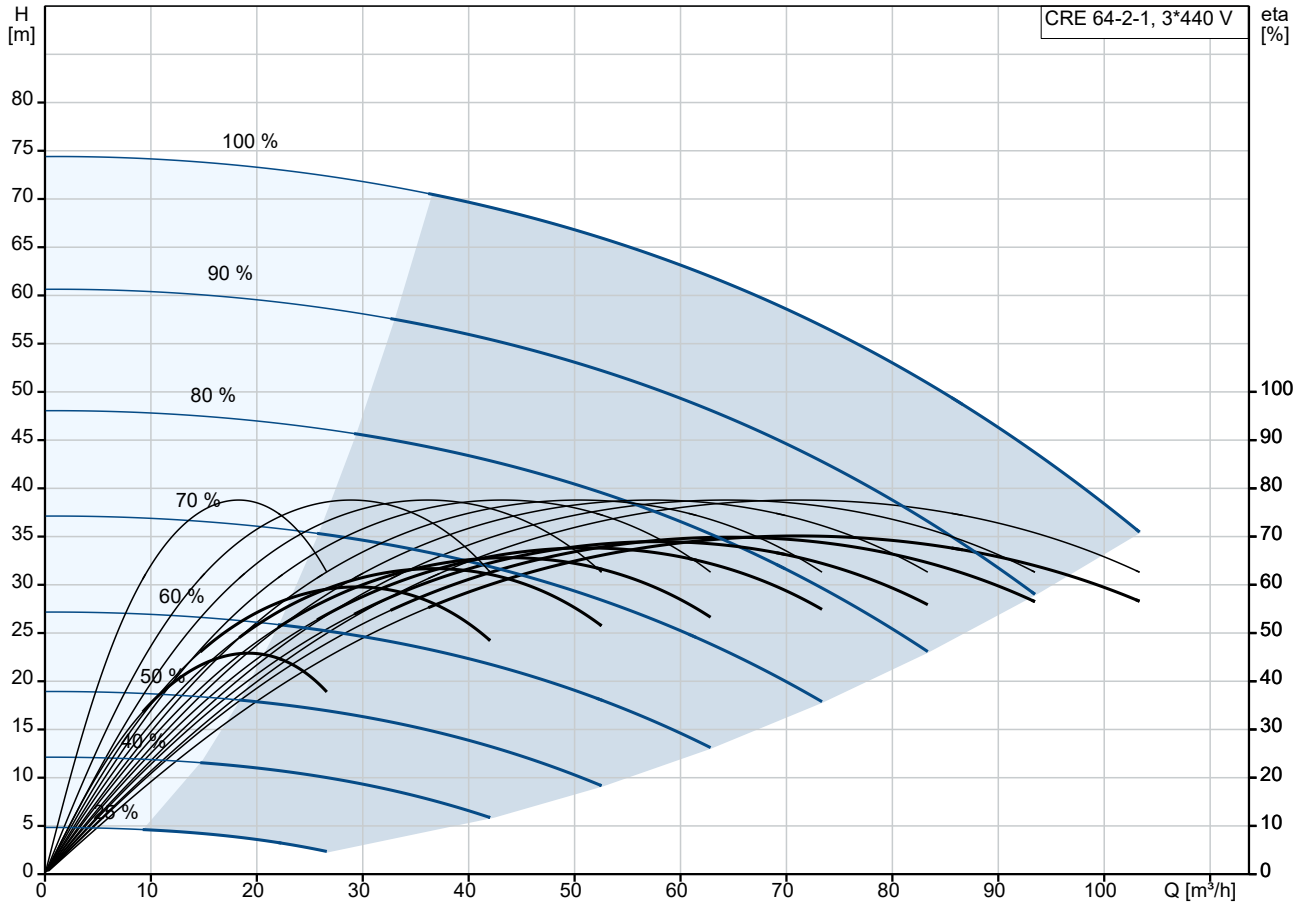
Electrical data:

Motor standard: IEC

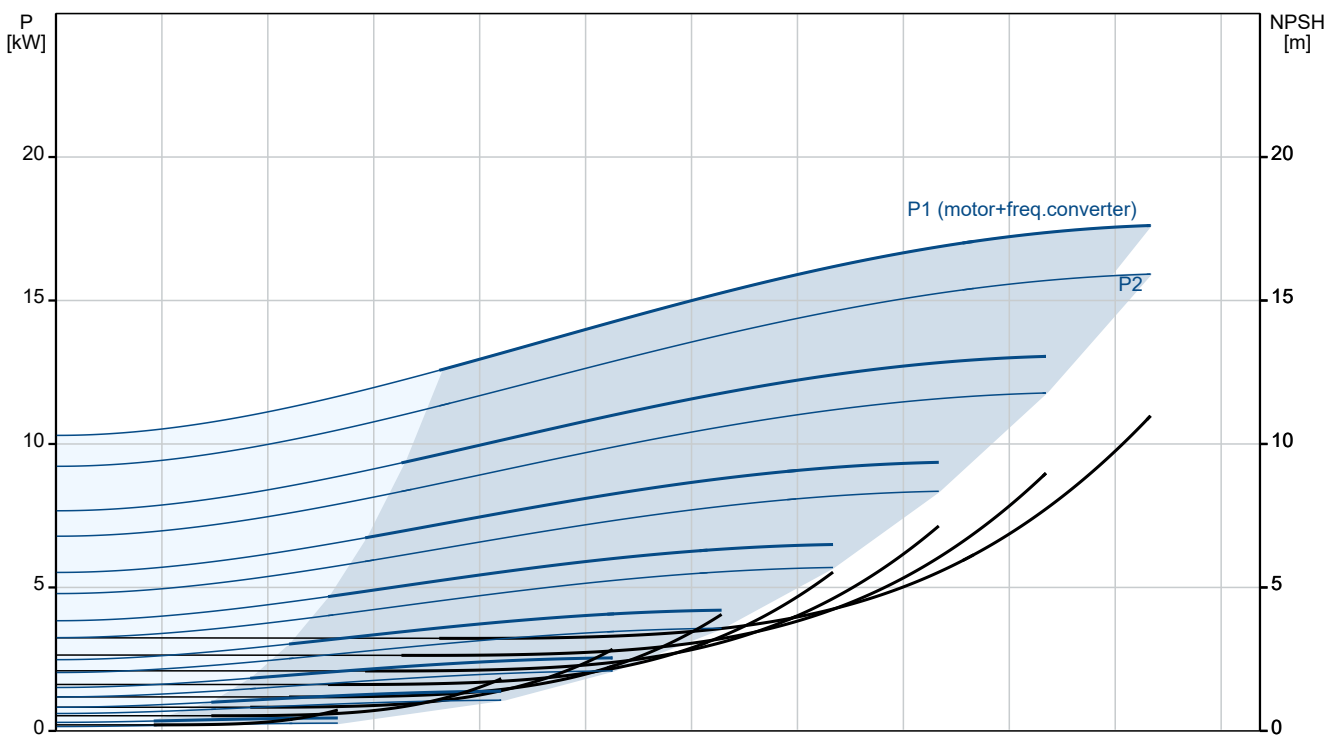
| Qty. | Description |
|------|-------------|
|------|-------------|

| | |
|---|--|
| 1 | <p>Motor type: 160LB</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 18.5 kW</p> <p>Power (P2) required by pump: 18.5 kW</p> <p>Over/undersize motor: Standard motor size</p> <p>Mains frequency: 50 / 60 Hz</p> <p>Rated voltage: 3 x 380-480 V</p> <p>Rated current: 37.0-31.0 A</p> <p>Cos phi - power factor: 0.91-0.88</p> <p>Rated speed: 480-3540 rpm</p> <p>Efficiency: IE3 92,4%</p> <p>Motor efficiency at full load: 92.4 %</p> <p>Number of poles: 2</p> <p>Enclosure class (IEC 34-5): IP55</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 85901026</p> <p>Controls:</p> <p>Frequency converter: Built-in</p> <p>Pressure sensor: Y</p> <p>Others:</p> <p>Minimum efficiency index, MEI ≥: 0.70</p> <p>Net weight: 219 kg</p> <p>Gross weight: 270 kg</p> <p>Shipping volume: 0.819 m³</p> <p>Danish VVS No.: 385948521</p> |
|---|--|

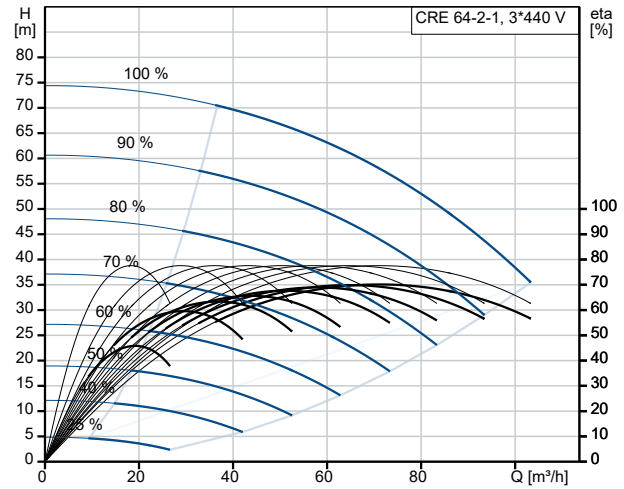
96124000 CRE 64-2-1 N-F-A-E-HQQE



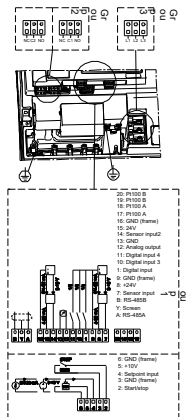
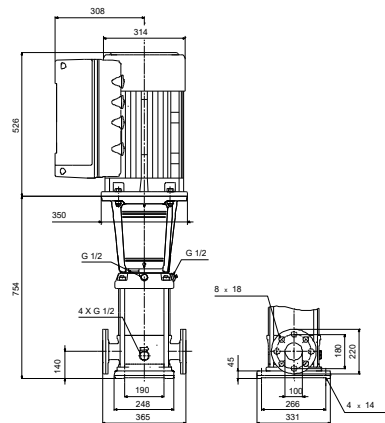
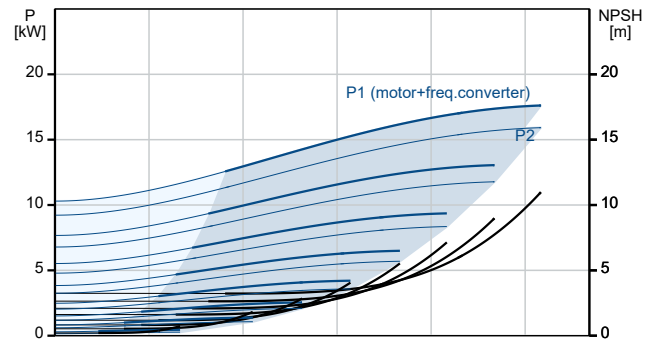
Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³



| Description | Value |
|--|----------------------------|
| General information: | |
| Product name: | CRE 64-2-1 N-F-A-E-HQQE |
| Product No: | 96124000 |
| EAN number: | 5700396703039 |
| Technical: | |
| Pump speed on which pump data are based: | 3540 rpm |
| Rated flow: | 77 m ³ /h |
| Rated head: | 53.8 m |
| Maximum head: | 74 m |
| Stages: | 2 |
| Impellers: | 2 |
| Number of reduced-diameter impellers: | 1 |
| Low NPSH: | N |
| Pump orientation: | Vertical |
| Shaft seal arrangement: | Single |
| Code for shaft seal: | HQQE |
| Approvals: | CE,EAC,UKCA,SEPRO |
| Approvals for drinking water: | WRAS,ACS |
| Curve tolerance: | ISO9906:2012 3B |
| Pump version: | N |
| Model: | B |
| Materials: | |
| Base: | Cast iron |
| Base: | EN 1563 EN-GJS-500-7 |
| Base: | ASTM A536 80-55-06 |
| Impeller: | Stainless steel |
| Impeller: | EN 1.4301 |
| Impeller: | AISI 304 |
| Material code: | A |
| Code for rubber: | E |
| Bearing: | SIC |
| Support bearing: | Graflon |
| Installation: | |
| t max amb: | 40 °C |
| Maximum operating pressure: | 16 bar |
| Max pressure at stated temp: | 16 bar / 120 °C |
| Max pressure at stated temp: | 16 bar / -30 °C |
| Type of connection: | DIN |
| Size of inlet connection: | DN 100 |
| Size of outlet connection: | DN 100 |
| Pressure rating for connection: | PN 16 |
| Flange size for motor: | FF300 |
| Connect code: | F |
| Liquid: | |
| Pumped liquid: | Water |
| Liquid temperature range: | -30 .. 120 °C |
| Selected liquid temperature: | 20 °C |
| Density: | 998.2 kg/m ³ |
| Electrical data: | |
| Motor standard: | IEC |
| Motor type: | 160LB |
| IE Efficiency class: | IE3 |
| Rated power - P2: | 18.5 kW |
| Power (P2) required by pump: | 18.5 kW |
| Over/undersize motor: | Standard motor size |
| Mains frequency: | 50 / 60 Hz |
| Rated voltage: | 3 x 380-480 V |



Pumped liquid = Water
Liquid temperature during operation = 20 °C
Density = 998.2 kg/m³





Company name:

Created by:

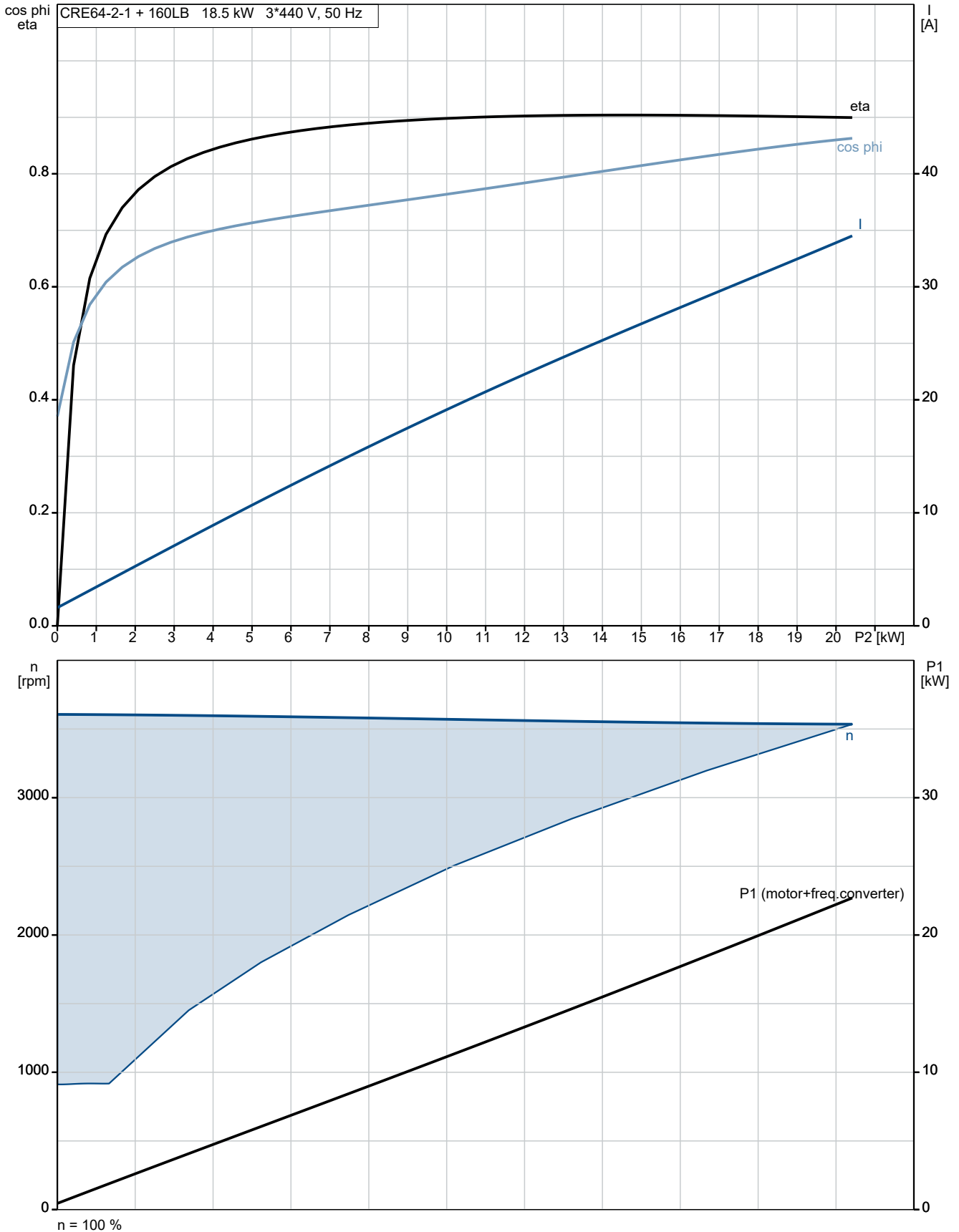
Phone:

Date:

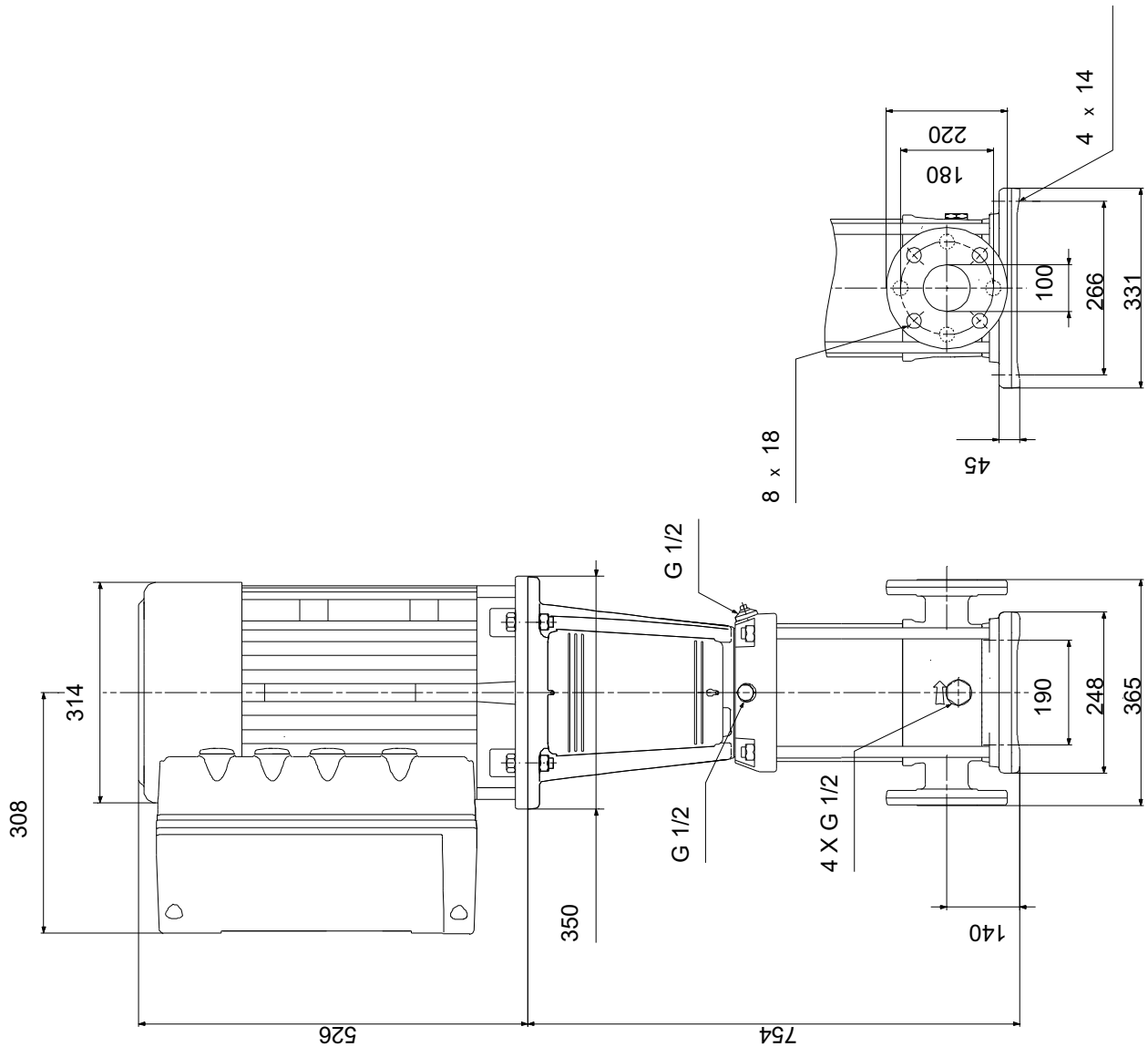
29/12/2022

| Description | Value |
|--|----------------------|
| Rated current: | 37.0-31.0 A |
| Cos phi - power factor: | 0.91-0.88 |
| Rated speed: | 480-3540 rpm |
| Efficiency: | IE3 92,4% |
| Motor efficiency at full load: | 92.4 % |
| Number of poles: | 2 |
| Enclosure class (IEC 34-5): | IP55 |
| Insulation class (IEC 85): | F |
| Built-in motor protection: | YES |
| Motor No: | 85901026 |
| Controls: | |
| Function Module: | ADVANCED I/O |
| Frequency converter: | Built-in |
| Pressure sensor: | Y |
| Others: | |
| Minimum efficiency index, MEI \geq : | 0.70 |
| Net weight: | 219 kg |
| Gross weight: | 270 kg |
| Shipping volume: | 0.819 m ³ |
| Config. file no: | 95139534 |
| Danish VVS No.: | 385948521 |

96124000 CRE 64-2-1 N-F-A-E-HQQE

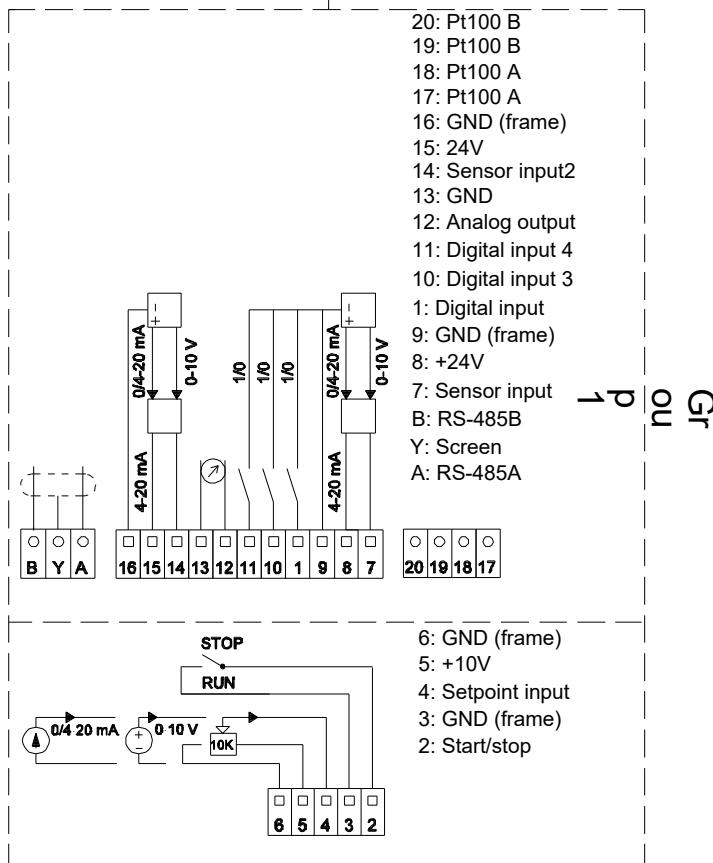
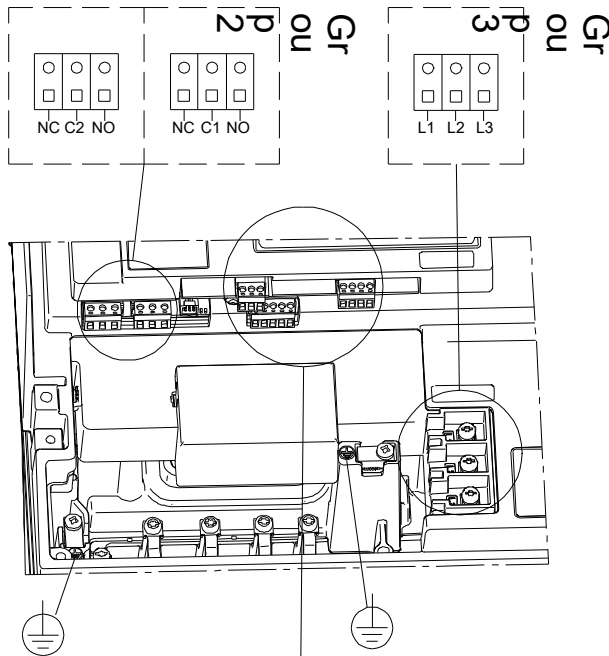


96124000 CRE 64-2-1 N-F-A-E-HQQE



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

96124000 CRE 64-2-1 N-F-A-E-HQQE



Note! All units are in [mm] unless others are stated.

